

POLYAKOV, V. P. and SHESTOV, N. S. and SHAFROV, D. F.

"Mechanical Converter for Electric Current"

Authors' Certificates  
Elktrosvyaz', 1958, No. 2, p. 78 (USSR)

DEVYATKIN, A.I.; POLYAKOV, V.P.

Making PKZh prestressed reinforced panels [Suggested by A.I.  
Deviatkin and others.] Rats. i izobr. predl. v stroi. no.6:  
4-7 '58. (MIRA 11:10)

(Concrete slabs)

POLYAKOV, V.P., kand.tekhn.nauk

"Mechanization of the erection of precast reinforced and plain concrete structures" by O.V.Sinev, A.T.Chistiakov. Reviewed by V.P.Poliakov! Nov.tekh.mont. i spets.rab. v stroi. 20 no.12: 30-31 D '58. (MIREA 12:1)  
(Building machinery) (Sinev, O.V.) (Chistiakov, A.T.)

MEN', A.N.; POLYAKOV, V.P.; SMOLENSKIY, G.A.; CHUFAROV, G.I.

Effect of short-range order on the magnetic properties of  
garnet-type ferromagnetics. Fiz.tver.tela 5 no.5:1286-1290  
(MIRA 16:6)  
My '63.

1. Institut metallurgii Ural'skogo filiala Akademii nauk,  
Sverdlovsk; i Institut poluprovodnikov AN SSSR, Leningrad.  
(Magnetic materials)

ALEKSEYEV, I.V.; POLYAKOV, V.P.; AVAKYAN, A.A.

Simple thermostatic device for the SF-4 spectrophotometer.  
Vop. med. khim. 9 no.1:89-92 Ja-F '63. (MIRA 17:6)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR,  
Moskva.

ACCESSION NR: AP4023389

8/0048/64/028/003/0447/0450

AUTHOR: Polyakov, V.P.

TITLE: Regarding the concentration dependence of the magnetic moment in some solid solutions with the spinel and perovskite structure [Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963]

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v.28, no.3, 1964, 447-450

TOPIC TAGS: solid solution, perovskite structure solid solution, spinel structure  
solid solution, saturation magnetization, solid solution/saturation magnetization,  
short range order

ABSTRACT: The theory of M.A.Gileo (J.Phys.Chem.Soc.,13,33,1960) according to which a magnetic ion in one sublattice contributes to the total magnetization only if it has at least two magnetic neighbors in the other sublattice, has previously been applied to explain the dependence of saturation magnetization on the concentration of nonmagnetic ions at tetrahedral sites, in a series of solid solutions having the garnet structure (G.A.Smolskiy, V.P.Polyakov and V.M.Yudin, Izv.AN SSSR,Ser.fiz. 25,1396,1961). The theory was later extended to take account of short range order

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ACCESSION NR: AP4023389

(A.N.Men', V.P.Polyakov, G.A.Smolenskiy and G.I.Chufarov, Fizika tverdogo tela, 5, No.5, 1286, 1963). In the present paper, Gileo's theory is employed to explain the concentration dependence of saturation magnetization observed by E.W.Gorter (Phil. Res. Rep., 9, 295, 321, 403, 1954) in the solid solutions  $\text{M}_\text{x}\text{Fe}_2\text{O}_4-\text{ZnFe}_2\text{O}_4$  ( $\text{M}_\text{x} = \text{Mn}$ ,  $\text{Co}, \text{Ni}$ ), having the spinel structure, and that observed by G.A.Smolenskiy, V.P.Polyakov and V.M.Yudin (Izv.AN SSSR,Ser.fiz.25,1396,1961) in the solid solutions  $\text{LaFeO}_3-\text{Sr}(\text{Ni}_{1/2}\text{W}_{1/2})\text{O}_3$ , having the perovskite structure. The data obtained by Gorter for the solutions with spinel structure do not agree with the simple two-sub-lattice model of Neel (Ann.phys., 3, 137, 1948). Gileo's theory, without short range order, gives curves that agree at least qualitatively with the experimental data. The author regards the agreement as satisfactory. The explanation by Gileo's theory is preferred to that proposed by Y.Yafet and C.Kittel (Phys.Rev., 87, 290, 1952), because the latter requires the assumption that the interaction within a single sub-lattice is of the same order of magnitude as that between the two sublattices. The saturation magnetization of the  $\text{LaFeO}_3-\text{Sr}(\text{Ni}_{1/2}\text{W}_{1/2})\text{O}_3$  solutions goes through a maximum at 60 atomic percent  $\text{Sr}(\text{Ni}_{1/2}\text{W}_{1/2})\text{O}_3$ . Gileo's theory without short range order predicts this maximum at a lower concentration. In the present paper the effect of short range order is taken into account as in the earlier application (Men'

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ACCESSION NR: AP4023389

et al, loc cit supra). This introduces an adjustable parameter into the theory and somewhat improves the agreement with experiment. "The author expresses his deep gratitude to G.A.Smolenskiy, who suggested the topic, and to A.N.Men', who supervised the theoretical calculation." Orig.art.has: 10 formulas and 2 figures.

ASSOCIATION: Institut poluprovodnikov Akademii nauk SSSR (Semiconductor Institute, Academy of Sciences, SSSR)

SUBMITTED: OO

DATE ACQ: 10Apr64

ENCL: OO

SUB CODE: PH

NR REF Sov: 003

OTHER: 004

Card 3/3

AUTHOR: Polyakov, V.P. SOV/99-59-1-11/13

TITLE: The Aswan Dam (Assuanskaya Plotina)

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, Nr 1, pp 52-53 (USSR)

ABSTRACT: The author describes the importance of the new Aswan dam that will be built by the Egyptian Government, with Soviet financial and material help.

Card 1/1

15-2660  
24-2200 (1144, 1147, 1137)

30075  
S/048/61/025/011/021/03:  
B117/B102

AUTHORS: Smolenskiy, G. A.; Polyakov, V. P., and Yudin, V. M.

TITLE: Magnetic properties of some ferrimagnetics with perovskite and garnet-type structure

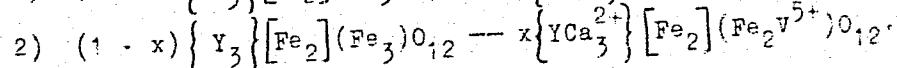
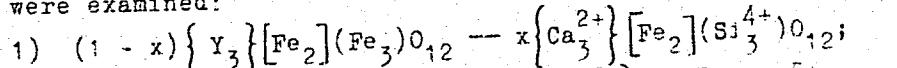
PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 11, 1961, 1396-1398

TEXT: The earlier shown possibility (Ref. 1: Smolenskiy, G. A., Isupov, V. A., Kraynik, N. N., Agranovskaya, A. I., Akademiya nauk SSSR. Izvestiya Seriya fizicheskaya, v. 25, no. 11, 1961, 1333) of producing ferrimagnetics as solid solutions with perovskite structure by ions in the octahedral sublattice was checked on  $\text{LaFeO}_3 - \text{Sr}(\text{Ni}_{0.5})\text{O}_3$  solid solutions. Polycrystalline specimens were prepared from the pulverized metal oxides by double annealing in air at  $1100^\circ\text{C}$  (2 hr) and  $1350^\circ\text{C}$  (1 hr). An X-ray structural analysis performed by A. G. Tutov showed that homogeneous solid solutions with perovskite structure will form in the examined system, with most of the compounds containing only little of the second phase. The magnetic moments were determined by the Faraday method. Card 1/4

30075  
S/048/61/025/011/021/031  
B117/B102

Magnetic properties of some ...

using Mohr's salt as a standard. The inhomogeneous magnetic field had a sufficiently large region of constant gradient. Between the poles it reached 8000 oe. The specimens were pressed into spheres 1-3 mm in diameter, depending on the magnitude of the magnetic moment of the substance. The measurements were made in the temperature range between -196° and +850°C. H = 0 was found for magnetization by extrapolation according to the linear law of  $m = f(H)$ . The phase transitions were strongly diffuse in the examined solid solutions, and one must therefore speak of a Curie range instead of a Curie point. Magnetization was examined as a function of concentration of the second component. It was established that ions are not completely ordered if the content of the second component attains up to 55 mole%. If it is more than 55 mole%, it may be assumed that the statistical ion distribution curve in octahedral sublattices of the solid solutions is disturbed, or that there is a second phase. In addition, two series of garnet-structure solid solutions were examined:



Card 2/4

30075  
S/048/61/025/011/021/031  
B117/B102

Magnetic properties of some ..

Calculations by M. A. Gilleo (Ref. 3, see below) for determining magnetic moments of mixed garnets were checked with these examples. The specimens were prepared from the metal oxides. The first system was pre-annealed at 1050°-1100°C (1 hr), and the second at 1000°C (1 hr). Final annealing took place at 1250°-1400°C in the first case, and at 1200°-1300°C in the second (1 hr each). A. G. Tutov controlled the formation of solid solutions by X-ray analysis. The lattice parameters became smaller with increasing content of the second component. A  $\text{YCa}_2\text{Fe}_3\text{VO}_{12}$  composition was not

obtained as a single phase. In case of low concentrations of the second component, magnetization was calculated from the equation

$$\sigma_{\text{ext.}} = \sigma_{\infty} (1 - a/H^2_{\text{int.}})$$

and at high concentrations, from

$$\sigma_{\text{ext.}} = \sigma_0 + \chi H_{\text{int.}}$$

The curves obtained showed a relatively good agreement with experimental results. A greater divergence is observable in the first system around the minimum. Ye. S. Sher is thanked for having provided the specimens, and A. G. Tutov for having studied them. There are 4 figures and 3 references: 1 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Fresia E. J., Katz Z., Ward, R., J. Amer. Chem. Soc., 81, 18, 4783 (1959); Ref. 3.

Card 3/4

L 11156-63      EWT(1)/BDS--AFFTC/ASD--LJP(C)  
ACCESSION NR: AP3000601

8/0181/63/005/005/1286/1290

56  
54

AUTHOR: Men', A. N.; Polyakov, V. P.; Smolenskiy, G. A.; Chufarov, G. I.

TITLE: Effect of near order on the magnetic properties of ferrimagnetic substances with garnet structure

SOURCE: Fizika tverdogo tela, v. 5, no. 5, 1963, 1286-1290

TOPIC TAGS: ferrimagnetism, garnet, saturation magnetization

ABSTRACT: A study was made of saturation magnetization in solid solutions of garnet containing nonmagnetic ions in tetrahedral and octahedral sites. This study was made with proper calculations for effect of near order and was undertaken to refine the magnetization theory of Gilleo. A comparison was made between theory and experiment for a solid solution of  $(1-x)Y_3Fe_5O_{12-x}Ca_3Fe_2Si_3O_{12}$ . This comparison is shown graphically in Fig. 1. It was found that calculations involving near order produce a shift in points at the extremes of the curve representing the relation of saturation magnetism to concentration. Comparison of theory with experiment may define two parameters, proposed in theory, that relate the energies of paired interactions. Orig. art. has: 1 figure and 23 formulas.

Metallurgical Institute UFAN; Institute of Semiconductors, Academy of Sciences

Card 1/4

POLYAKOV, V.P.

Universal pendulum magnetometer. Prib. i tekhn. eksp. 8 no.5:  
190-193 S-0 '63. (MIRA 16:12)

1. Institut poluprovodnikov AN SSSR.

ACCESSION NR: AP4043401

S/0181/64/006/008/2556/2557

AUTHORS: Smolenskiy, G. A.; Polyakov, V. P.

TITLE: Neel temperature and magnetization of ferrites with garnet-type structure, containing vanadium ions

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2556-2557

TOPIC TAGS: ferrite material, yttrium iron garnet, magnetization, vanadium compound, solid solution, tetrahedral system, valence

ABSTRACT: This is a comment on the results obtained by the authors previously (Izv. AN SSSR, ser. fiz., no. 11, 1396, 1961), and interprets certain recent reports (S. Geller et al., Appl. Phys. Lett., v. 4, 18, 1963) which lead to a lower theoretical Neel temperature. In view of the observed very high Neel temperature in solid solutions of the system  $Y_3Fe_5O_{12}$ - $YCa_2Fe_5VO_{12}$ , it is suggested that the vanadium ion, which occupies a tetrahedral position in the lattice,

Card 1/4

ACCESSION NR: AP4043401

has in addition to states with zero spin also states with nonzero spin. This is also confirmed by the presence of many vanadium compounds having different valences. The authors suggest that it would be interesting to study some solutions based on some ferrimagnet or antiferromagnet containing titanium ions, where "mixing" of the magnetic state of the titanium ions could be expected. Some of these proposed solid solutions may also yield compounds with large initial permeability. Orig. art. has: 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AN SSSR)

SUBMITTED: 03Apr64

ENCL: 02

SUB CODE: SS

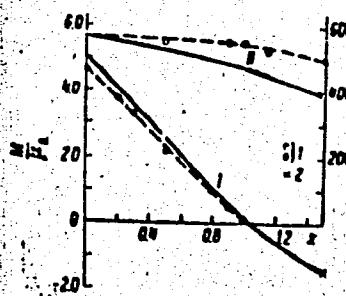
NR REF SOV: 001

OTHER: 004

Card 2/4

ACCESSION NR: AP4043401

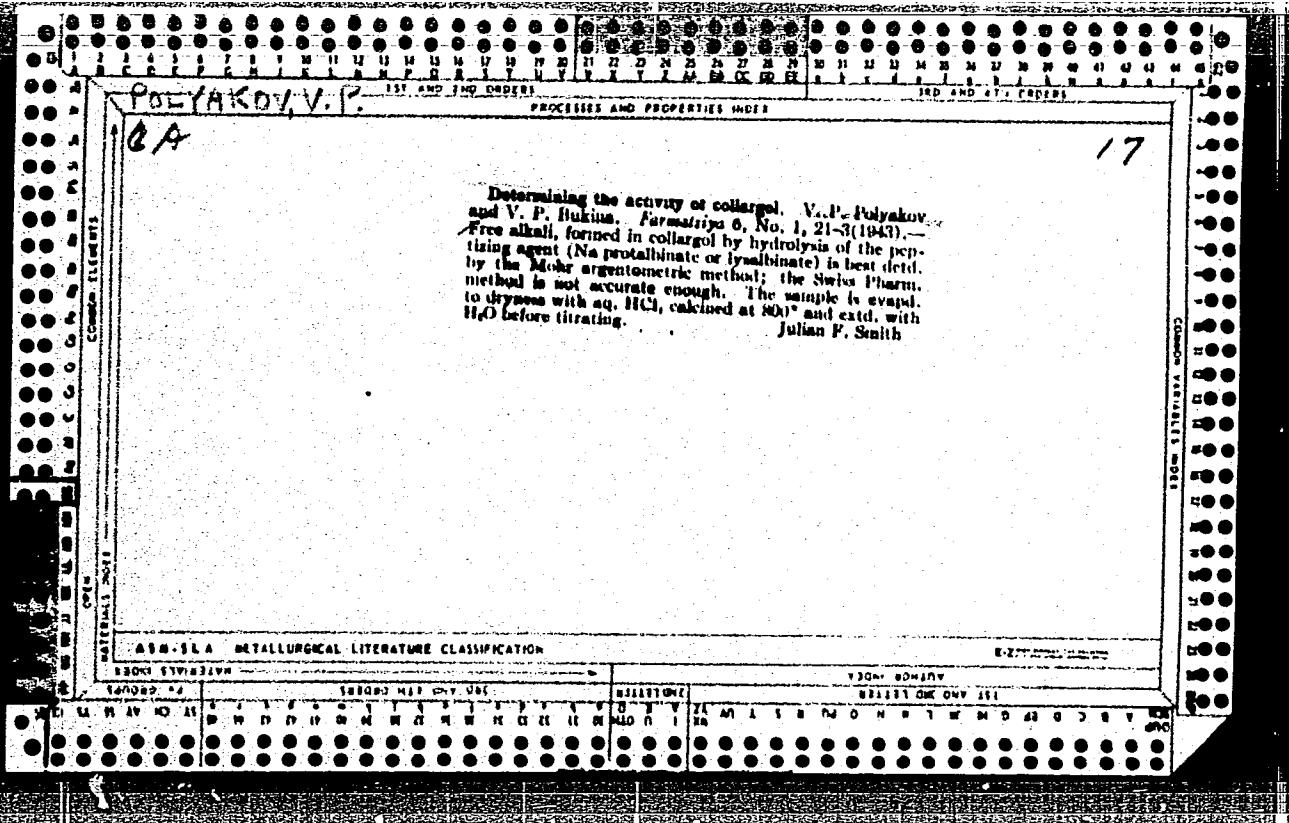
ENCLOSURE, 01



Dependence of magnetization (in Bohr magnetons)  
(1) and of the Neel temperature (II) of solid  
solution- in the system  $Y_{3-2x} Ca_{2x} Fe_{5-x} V_x O_{12}$

1 - present data, 2 - data by others.  
Continuous curves are calculated

Card 3/4



POLYAKOV, V. P.

LITVINENKO, L.M.; POLYAKOV, V.P.; GREKOV, A.P.; CHERNETSKAYA, A.N.

Analysis of acetylsalicylic acid chloride. Med.prom. 11 no.4:  
42-43 Ap '57. (MLRA 10:6)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo  
i Khar'kovskiy khimiko-farmatsevticheskiy zavod "Krasnay zvezda".  
(CHLORIDES)

1. LITVINENKO, L.M.; POLYAKOV, V.P.; GREKOV, A.P.; CHERNETSKAYA, A.M.

Analysis of aminocantipyrine in testing aminopyrine production.  
Med.prom. 11 no.1:46-48 Ja '57. (MLRA 10:2)

1. Kafedra organicheskoy khimii Khar'kovskogo universiteta imeni  
A.M.Gor'kogo i TSentral'naya laboratoriya Khar'kovskogo khimiko-  
farmatsevticheskogo zavoda "Krasnaya zvezda"  
(PYRAMIDONE) (ANTIPYRINE)

POLYAKOV, V.P.

Qualitative reactions to antipyrine and formaldehyde in the production of pyramidon. Med.prom. 12 no.10:40-41 O '58

(MIRA 11:11)

1. Khar'kovskiy khimiko-farmatsevticheskiy zavod "Krasnaya zvezda."  
(ANTIPYRINE)  
(FORMALDEHYDE)  
(AMINOPYRINE)

BEZUGLYY, V.D.; DMITRIYEVA, V.N.; TARASYUK, T.S.; POLYAKOV, V.P.; IZMAYLOV,  
N.A.

Polarographic determination of glyoxylic acid. Zhur.anal.khim. 15  
no.2:231-233 Mr-Ap '60. (MIRA 13:7)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M.Gor'kogo i  
Khar'kovskiy zavod zubovrachebnykh materialov.  
(Glyoxylic acid)

I. 42932-66 EWT(m)/EWP(w)/I/EWP(t)/ETI .JP(c) JD/DJ

ACC NR: AP6029040

(A)

SOURCE CODE: UR/0413/66/000/014/0056/0056

INVENTOR: Sul'zhenko, N. K.; Barannik, V. P.; Polyakov, V. S.; Semenov, V. P.;  
Dubinkin, V. P.

ORG: none

TITLE: Preparative method for a lubricant. Class 23, No. 183863

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 56

TOPIC TAGS: lubricant, titanium, titanium alloy, ~~methylene iodide~~, ~~iodoform~~, iodine

ABSTRACT: An Author Certificate has been issued for a preparative method for a methylene iodide-base lubricant suitable for parts made of titanium and its alloys. To lower the friction coefficient, iodine, iodoform, or a mixture of the two is dissolved in the methylene iodide. [4] [SM]

SUB CODE: 11/ SUBM DATE: 05Jul62/ ATD PRESS: 5061

Card 1/1

UDC: 621.892.84

I 22148-66 EWP(f)/T-2/ETC(m)-6 WW  
ACC NR. AP6012950

SOURCE CODE: UR/0096/65/000/011/0002/0012  
53

AUTHOR: Kosyak, Yu. F. (Engineer); Galatsan, V. N. (Engineer); Shilin, Yu. P.  
(Engineer); Polyakov, V. S. (Engineer); Abramenko, O. B. (Engineer); Nosyl'ko, D. R.  
(Engineer)

ORG: KHTGZ, ORGRES, Pridneprovskaya GRES

TITLE: First experience in starting and operation of a pilot model of the K-300-240-  
KhTGZ turbine

SOURCE: Teploenergetika, no. 11, 1965, 2-12

TOPIC TAGS: thermoelectric power plant, electric rotating equipment

ABSTRACT: Since the end of 1963, a combined team from ORGRES (Moscow), the  
Khar'kov Turbine Plant and the Pridneprovskaya GRES have been working to de-  
velop and test starting, load and stopping regimes for a 300 Mw power unit  
consisting of the TPP-110 boiler and the K-300-240-KhTGZ turbine. During  
the initial and most subsequent startups, the temperature states of the steam  
conduits and the turbine were monitored with both standard control-measurement  
devices and special thermocouples placed for the investigations. Starts were  
performed from the cold, hot and intermediate states. The article presents  
a cross section of the turbine, steam-flow chart during startup, a diagram of  
the locations of thermocouples in the turbine during testing, and startup  
graphs for the various states. A recommended startup schedule from the cold

UDC: 621.165.001.42.001.5

Card 1/2

L 22148-66

ACC NR: AP6012950

state is presented in graphic form. The authors conclude that the graph represents a startup regime which is satisfactory for cold starting of the unit, but make several concrete recommendations for areas of caution or improvement. It was found that the cooling of the unit does not result in over-standard temperature or dimensional differences at any time, so that startup from partially-cooled states is always possible. [JPRS] Orig. art. has: 9 figures.

SUB CODE: 10.13 / SUBM DATE: none / ORIG REF: 002

Card 2/2 dda

ANOSOV, A.S.[deceased]; BARBASH, I.D.; KONKOV, V.N.; KOSTAREV, V.N.;  
KUGUSHEVA, V.M.; POLYAKOV, V.S., prof., red.

[Laboratory manual for a course on machine parts] Uchebnoe  
posobie k laboratornym rabotam po kursu detalei mashin. 2. izd.  
dop. i perer. [By A.S.Anosov i dr. Leningrad, Leningr. poli-  
tekhn. in-t im. M.I.Kalinina, 1964. 55 p. (MIRA 18:4)

POLYAKOV, V.S.; BARBASH, I.D.; PLAKUNOV, K.K.

Investigating the new design of a hinge for transmitting the  
rotation between two noncoaxial shafts. Trudy LPI no.236:  
15-22 '64. (MIRA 18:3)

POLYAKOV, V.S.; BARBASH, I.D.

Investigating dynamic properties of flexible couplings. Trudy  
LPI no.236:23-31 '64. (MIRA 18:3)

KOSYAK, Yu.F., inzh.; GALATSAN, V.N., inzh.; SHILIN, Yu.P., inzh.;  
POLYAKOV, V.S., inzh.; ABRAMENKO, O.B., inzh.; MOSUL'KO, D.R., inzh.

Trial run and experience in the operation of the K-300-240-  
KhTGZ turbine unit. Teploenergetika 12 no.11:2-12 N '65.

(MIRA 18:10)

1. Khar'kovskiy turginnyy zavod im. S.M. Kirova; Gosudarstvennyy  
trest po organizatsii i ratsionalizatsii rayonnykh elektrostantsiy  
i setey i Pridneprovskaya gosudarstvennaya rayonnaya elektro-  
stantsiya.

A ACC NR: I 9220-66 EWT(m)/T/EWP(t)/EWP(h)	LIP(c) 44	JD/NB/DJ 44
SOURCE CODE: UR/0286/65/000/022/0043/0043		
INVENTOR: Sul'zhenko, N. K.; Barannik, V. P.; Polyakov, V. S.; Dubinkin, V. P.; Semenov, V. P.		
ORG: none	11/14	71
TITLE: Method for preparing lubricating greases for parts from titanium and titanium based alloys. Class 23, No. 176352 44.55		
SOURCE: Byulleten' izobreteniy i tovarknykh znakov, no. 22, 1965, 43		
TOPIC TAGS: titanium, titanium alloy, lubrication, halogenated organic compound, grease, paraffin wax, hydrocarbon, antifriction metal, anticorrosion additive, chlorinated paraffin		
ABSTRACT: An Author Certificate has been issued for a preparative method for lubricating greases for titanium and titanium-alloy parts. The grease is based on halogenated hydrocarbons. To enhance the <u>antifriction</u> properties of titanium and the <u>anticorrosive</u> properties of the grease, a chlorinated paraffin is thickened with solid chlorine-containing organic compounds, such as chlorinated poly(vinyl chloride) resin, hexachlorobenzene, or 70% chlorinated paraffin [sic]. [BN]		
SUB CODE: 11/	SUBM DATE: 13Jan64/	ATD PRESS: 4158
Card 1/1	UDC: 621.893.002.235;546.821	

POLYAKOV, V.S., dotsent, kand.tekhn.nauk; KUDRYAVTSEV, V.N., prof., doktor tekhn.nauk; ZUBANOV, M.P., dotsent, kand.tekhn.nauk; ANOSOV, A.S., dotsent, kand.tekhn.nauk; BARBASH, I.D., inzh.; MYAGKOV, V.D., inzh.; KOLCHIN, N.I., prof., doktor tekhn.nauk, red.; SPITSYN, N.A., prof., doktor tekhn.nauk, retsenzent; FADEYEV, N.K., dotsent, kand.tekhn. nauk, red.; GOLOVANOV, N.F., kand.tekhn.nauk, red.; POL'SKAYA, P.G., tekhn.red.

[Machine parts] Detali mashin. Pod red. N.I. Kolchinn. Moskva.  
Gos. nauchno-tekhn.izd-vo mashinostroit. i sudostroit. lit-ry.  
1954. 720 p. (MIRA 11:12)

(Machinery)

PAVLOV, Yakov Mikhaylovich, dotsent, kand.tekhn.nauk; POLYAKOV, V.S.,  
kand.tekhn.nauk, red.; SIMONOVSKIY, N.Z., red.izd-va;  
SHCHETININA, L.V., tekhn.red.

[Machine parts] Detali mashin. Izd.2. Moskva, Gos.nauchno-tekhn.  
izd-vo mashinostroit.lit-ry, 1960. 523 p.

(MIRA 14:3)

(Machinery--Design and construction)

POLYAKOV, V.S.; KRUCHININ, I.G.

Relationship between the torque on roller bits and the axial load.  
Neft. khoz. 39 no.9:7-12 S '61. (MIRA 15:1)  
(Turbodrills)

POLYAKOV, V.S.; BARBASH, I.D.

Experimental investigation of flexible clutches. Trudy LPI  
no.219:140-152 '62. (MIRA 15:12)  
(Clutches (Machinery)—Testing)

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342010015-4

POLYAKOV, V.S.; LEFTEROV, L.St.

Investigating a bar coupling under static loading. Trudy  
LPI no.254:18-27 '65. (MIRA 19:1)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342010015-4"

POLYAKOV, V.S.

Problems in the mechanics of drill-bit operations. Trudy LPI  
no.191:235-266 '57. (MIRA 11:9)  
(oil well drilling)

ALEKSEYEV, Zosim Kirillovich, kand. tekhn.nauk, dots.; RUZHENTSEV, S.P.,  
prof., retsentent.; KULIKOV, G.A., kand. tekhn. nauk, dots.;  
POLYAKOV, V.S., kand.tekhn.nauk, red.; VASIL'YEVA, V.P., red.izd-va.;  
POL'SKAYA, R.G.,tekhn. red.

[Manual on the analysis and design of reduction gears] Rukovodstvo  
po raschetu i proektirovaniyu reduktorov. Moskva, Gos. nauchno-tekhn.  
izd-vo mashinostroit. lit-ry, 1958. 359 p. (MIRA 11:12)  
(Gearing)

POLYAKOV, V.S.

PAVLOV, Yakov Mikhaylovich, dotsent, kand.tekhn.nauk; ITSKOVICH, G.M.,  
inzh., retsenzent; POLYAKOV, V.S., dotsent, kand.tekhn.nauk,  
red.; SIMONOVSKIY, N.Z., red.isd.; POL'SKAYA, R.G., tekhn.red.

[Machine parts] Detali mashin. Moskva, Gos.nauchno-tekhn.  
izd-vo mashinostroit.lit-ry, 1958. 511 p. (MIRA 12:3)  
(Machinery--Design)

POLYAKOV, V. S.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 307 - I

BOOK

Call No.: TJ230.K37

Authors: POLYAKOV, V. S., KUDRYAVTSEV, V. N., ZUBANOV, M. P.,  
ANOSOV, A. S., BARBASH, I. D., MYAGKOV, V. D.

Full Title: MACHINE ELEMENTS

Transliterated Title: Detali Mashin

Publishing Data

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Publishing House: State Publishing House for Machine Building and Shipbuilding  
Literature (Mashgiz)

Date: 1954

No. pp.: 720

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Editors: Golovanof, N. F., Kandidat of Technical  
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Doctor of Technical Sciences

Others: None

Tech. Ed.: None

Appraisers: Spitsyn, N. A.,  
Professor, Doctor of  
Technical Sciences

Members of the chain of  
"Machine Elements" of the  
Moscow Higher Technical  
School, and of the Leningrad  
Military-Mechanical Institute

Text Data

Coverage: This book gives basic information on the calculation and design of  
machine elements, mechanical transmissions, and reductors. It consists

1/3

Detali Machin

AID 307 - I

of the teaching material used for lectures in the Leningrad Polytechnical Institute im. Kalinin, M. I., and in other Universities in Leningrad. It is divided into four parts. Each of these parts is provided with separate listings of bibliography and sources.

Diagrams, graphs, tables, etc.

This a good textbook; however, nothing new or original could be found in it.

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PHASE I BOOK EXPLOITATION SOV/3842

Polyakov, Vladimir Sergeyevich, and Iosif Davidovich Barbash

Mufti; konstruktsii i raschet (Clutches; Design and Construction)  
2nd ed., rev. and enl. Moscow, Mashgiz, 1960. 346 p. Errata  
slip inserted. 7,500 copies printed.

Reviewer: P.A. Lebedev, Candidate of Technical Sciences; Ed.:  
V.G. Markov, Candidate of Technical Sciences; Managing Ed. for  
Literature on the Design and Operation of Machinery (Leningrad  
Division, Mashgiz); F.I. Fetisov, Engineer; Ed. of Publishing  
House: N.Z. Simonovskiy; Tech. Ed.: O.V. Speranskaya.

PURPOSE: This book is intended for designers, mechanics, students,  
and teachers in the field of machine building.

COVERAGE: The authors discuss basic theory, design, construction,  
and working principles of couplings and clutches for general  
use and for special machinery. Well-known types of couplings and  
clutches and recent developments in the field are presented. No

Card 1/6

SOV/3842

## Clutches; Design (Cont.)

personalities are mentioned. There are 95 references: 85 Soviet,  
6 German, and 4 English.

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## Clutches; Design (Cont.)

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Clutches; Design (Cont.)

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Appendix I

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AVAILABLE: Library of Congress (TJ 1074 .P6 1960)

Card 6/6

VK/rn/jb  
8-15-60

PERSHIN, N.I.; ALEKSANDROV, V.I.; ILLERITSKIY, N.Ye.; TABACHKOV, I.F.;  
BOL'SHAKOV, V.I.; KANAR', I.A.; YAS'KO, A.M.; KLYUKIN, A.P.;  
POLYAKOV, V.S.; FILIPPOVA, N.A.; SMAGORINSKIY, B.S., red.;  
IZHBOLDINA, S.I., tekhn. red.

[The millionth tractor; on the occasion of the 30th anniversary of the Stalingrad Tractor Plant (1930-1960)] Mil-  
lionnyi traktor; k 30-letiu Stalingradskogo traktornogo za-  
voda (1930-1960). Stalingrad, Stalingradskoe knizhnoe izd-vo  
1960. 94 p. (MIRA 16:9)

1. Stalingradskiy traktornyj zavod im. Dzerzhinskogo.  
(Volgograd--Tractor industry)

POLYAKOV, V.S.; BARBASH, I.D.; ORLOVA, L.I., red.izd-va; MIKHEYEVA,  
R.Nry red.izd-va; SPERANSKIY, O.V., tekhn.red.

[Clutches; design and construction] Mufty; konstruktsii i  
raschet. Izd.3., ispr. Moskva, Mashgiz, 1964. 362 p.  
(MIRA 17:3)

YERUSALIMSKIY, A.M.; IVANOV, A.A., inzhener, otvetstvennyy redaktor;  
POLYAKOV, V.S., kandidat tekhnicheskikh nauk, glavnyy redaktor;  
TISHKOVA, M.V., tekhnicheskiy redaktor

[Theory, construction and calculations for motorcycles] Teoriia,  
konstruktsiia i raschet mototsikla. Izd. 2-e, ispr. i dop. Moskva,  
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1947. 414 p.  
(Motorcycle industry) (MLRA 8:2)

PAVLOV, Ya.M., kandidat tekhnicheskikh nauk, dotsent; ITSKOVICH, G.M.,  
inzhener, retsentent; POLYAKOV, V.S., kandidat tekhnicheskikh  
nauk, redaktor; FETISOV, Y.I., inzhener, redaktor.

[Machine parts] Detali mashin. Moskva, Gos. nauchno-tekhn. izd-  
vo maskinostreitel'noi i sudostroitel'noi lit-ry. Moskva, 1954.  
480 p. (MLRA 7:?)

1. Leningradskiye otsteleniye Mashgiza. Zavedayushchiy redaktsiей  
(for Fetisov)  
(Machinery)

PAVLOV, Yakov Mikhaylovich, kandidat tekhnicheskikh nauk, dotsent; POLYAKOV, V. S.,  
kandidat tekhnicheskikh nauk, redaktor; ITSKOVICH, G. M., Inzhe-  
ner, retsenzent; SIMONOVSKIY, L. Z., redaktor; POL'SKAYA, R. G., tekhnicheskiy redaktor

[Machine parts] Detali mashin. Isd. 2-e, ispr. i dop. Moskva, Gos.  
nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 559 p.  
(Machinery--Design) (MLRA 9:4)

POLYAKOV, V.O.

Mortar mixers designed by the Main Administration of the Moscow  
Building Trust. Ger.khes.Mosk.29 no.10:12-17 O '55. (MLRA 9:2)

1.Glavnyy mekhanik 1-go Territorial'nego upravleniya Glavnemesstroya.  
(Mixing machinery)

POLYAKOV, V.S.; SHCHERBAKOV, A.V.

~~Coefficient of friction between the friction guide and the cutter of a differential bit. Nauch.-tekhn.inform.biul. LPI no.11:88-95 '58.~~ (MIRA 12:11)  
(Boring machinery)

ALEKSEYEV, Grigorij Porfir'yevich; MAZOVER, Iosif Semenovich; PAYKIN,  
Ye.V., inzh., retsentzent; POLYAKOV, V.S., dotsent, kand.tekhn.  
nauk, retsentzent; SERDYUKOV, S.A., nauchnyy red.; LUKASHEVICH,  
L.A., red.; SHAURAK, Ye.N., red.; TSAL, R.K., tekhn.red.

[Manual for machinery designers and builders; formulas and  
calculations] Spravochnik konstruktora-mashinostroitelia;  
formuly i raschety. Leningrad, Gos.soiuznoe izd-vo sudostroit.  
promyshl., 1961. 447 p. (MIRA 14:6)  
(Machinery—Construction)

POLYAKOV, Vladimir Sergeevich; BARBASH, Iosif Davidovich; LEBEDEV,  
P.A., kand.tekhn.nauk, retsenzent; MARKOV, V.G., kand.tekhn.  
nauk, red.; SIMONOVSKIY, N.Z., red.izd-va; SPERANSKAYA, O.V.,  
tekhn.red.

[Clutches; design and construction] Mufty; konstruktsii i  
raschet. Izd.2., dop. i perer. Moskva, Gos.nauchno-tekhn.izd-vo  
mashinostroit.lit-ry, 1960. 346 p. (MIRA 13:3)  
(Clutches (Machinery))

KRAYNIY, K.I.; POLYAKOV, V.T.; TRUBACHEV, B.V.

Automatic maintenance of a d.c. generator voltage by  
means of a saturation choke. Prom.energ. 15 no.5:23-25  
My '60. (MIRA 13:7)  
(Automatic control) (Electric generators)

86769

S/094/60/000/005/001/003

E073/E535

9,2840 (1020,1048,1138)

AUTHORS: Krayniy, K. I., Polyakov, V. T. and Trubachev, B. V.

TITLE: Automatic Maintenance of the Voltage of a d.c.  
Generator by Means of a Saturation Choke

PERIODICAL: Promyshlennaya energetika, 1960, No.5, pp. 23-25

TEXT: The authors applied a saturation choke for maintaining a given voltage on a 75 kW, 1500 r.p.m., 440 V d.c. generator driven by an asynchronous motor. The generator is operating with non-uniform loads between 0 and 200 A, i.e. there are short duration over-loads by 40%. This causes sharp voltage variations which lead to temporary disorganization of the technological process. Without the saturation choke, the external characteristic shows a drop from a no-load voltage of about 400 V to about 260 V for a load of 220 A. Automatic maintenance of the voltage is effected by connecting into the excitation circuit a saturation choke with a positive feedback and connecting a selenium rectifier in series with the excitation winding (see Fig.2). First the regulator is set at no-load for 420 V by means of the resistance  $R_1$  of the excitation circuit. With increasing load, the current intensity in the control winding OY will increase, the reactance

Card 1/3

X

86769

S/094/60/000/005/001/003  
E073/E535Automatic Maintenance of the Voltage of a d.c. Generator by Means  
of a Saturation Choke

of the a.c. windings OA will decrease and the voltage on the selenium rectifier BC will increase. Thus, change in the rectifier voltage will correspond to the change in the load current and since the voltage of the rectifier superimposes on the voltage of the excitation winding, the voltage of the generator remains constant. With decreasing load, the voltage of the rectifier will drop and the voltage of the generator will remain unchanged. Accurate adjustment of the voltage at various loads is effected by varying the resistance  $R_{\text{in}}$  and the resistance  $R_{\text{OC}}$ , which is connected in series with the feedback winding OC. The further part of the paper is devoted to calculating the voltage boosting circuit, particularly to determining the data of the saturation chokes. There are 5 figures.

Card 2/3

86769

S/094/60/000/005/001/003  
E073/E535

Automatic Maintenance of the Voltage of a d.c. Generator by Means  
of a Saturation Choke

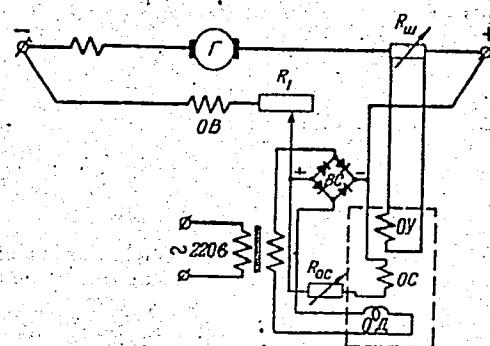


Рис. 2.

Card 3/3

30

VISHNEVSKIY, V.M., kand.istor.nauk; GAYDASHENKO, K.P.; DUDOROV, V.M.;  
KLEYMAN, T.Ye.; KRUSHANOV, A.I., kand.istor.nauk; KUCHERYAVENKO,  
V.T.; LEVITSKIY, V.L.; OKSTUZ'YAN, D.V.; POLYAKOV, V.V.;  
SAMOKHVALOV, V.A.; SVIN'IN, V.V.; STEPANOVA, L.F.; SUSHKOV, B.A.;  
FISHER, Ye.L.; BELYKH, D.P., otv.red.; AVERKIN, B.Z., red.;  
ZUSMAN, Ye.I., red.; MAYOROV, V.M.; red.; KIREYEVA, T.R.,  
vedushchiy red.; BUTOVA, L.A., tekhn.red.

Vladivostok, 1860-1960. Vladivostok, Primorskoe knizhnoe  
izd-vo, 1960. 271 p. (MIRA 13:11)  
(Vladivostok)

Polyakov, V.V.  
KALAUS, A.Ye.; RABINERZON, M.A.; ZAKHAROVENKO, P.I.; BASHKATOV, T.V.;  
POLYAKOV, V.V.; ZAYTSEVA, A.B.

Oil-masterbatched rubbers and their technical characteristics.  
(MIRA 11:1)  
Khim. prom. no.6:333-342 S '57.  
(Rubber, Synthetic)

POLYAKOV Vsevolod Vasil'evich

MORACHEVSKIY, Ivan Ivanovich; POLYAKOV, Vsevolod Vasil'evich; ANDRUSHCHAK, V.  
redaktor; IOAKIMIS, A., tekhnicheskiy redaktor

[Advanced techniques in making bricks and tiles] Perekovye metody  
izgotovleniya kirkpicha i cherepitsy. Kiev, Gos.izd-vo lit-ry po  
stroit. i arkhit. USSR, 1957. 111 p. (MLR 10:10)  
(Brickmaking) (Tiles)

YEKTOV, I.M.; ZARUYEV, V.M.; GUROV, S.A.; REVENKO, I.F.; V rabote  
prinimali uchastiye : KALMANOVICH, Yu.R.; GRIGOR'YEV, F.N.;  
KOSHELENKO, A.M.; LITVINENKO, Yu.P.; DMITRIYEV, V.D.;  
POLYAKOV, V.V.; PETUSHKOV, Ye.S.; FIRSOV, P.V.

Rolling double bulb-bar shapes with longitudinal cutting in  
the finishing mill. Stal' 20 no. 12:1113-1115 D '60.  
(MIRA 13:12)

1. Stalinskiy metallurgicheskiy zavod i Donetskii politekhniches-  
kiy institut.  
(Rolling (Metalwork))

KOSTERIN, S.I.; POLYAKOV, V.V.; SEMENOV, N.I.; TOCHIGIN, A.A.

Hydraulic resistance of steam-water flows in vertical unheated pipes.  
Inzh.-fiz. zhur. 5 no.7:3-10 Jl '62. (MIRA 15:7)

1. Institut mekhaniki AN SSSR, Moakva.  
(Hydrodynamics)

POLYAKOV, V.V., Eng.; BAZHENOV, I.R., Eng.; BLAGODER, P.F., Eng.

Efficiency, Industrial

Socialist competition of the workers of a heating and electric power station for thoroughgoing economy of fuel and electric energy. Rab. energ., 2, No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 1000, Uncl.

POLIAKOV, V. V.; BAZHENOV, I. R.; BLAGODER, P. F.

USSR (600)

Power Plants

For all-around fuel and electric energy economy of heating and electric power stations. Gor. khoz. Mosk. 26 no. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

POLYAKOV, V. V.

AID P - 1321

Subject : USSR/Engineering

Card 1/2 Pub. 110-a - 3/19

Authors : Davidov, A. A., Eng., Polyakov, V. V., Eng. and Sheynin, B. I., Kand. of Tech. Sci.

Title : Study of the distribution of the steam-water mixture from the header along the piping system

Periodical : Teploenergetika, 2, 15-19, F 1955

Abstract : The results of research experiments are presented concerning the distribution of the steam-water mixture as observed on laboratory test equipment. Those experiments show the relation existing between the indexes of distribution of the steam-water mixture and of the volume load per second of the distributing header. Recommendations are presented concerning the choice of some elements of construction. Diagrams, charts.

AKOL'ZIN, P.A.; GURVICH, S.M.; KOTLYAR, R.V.; KOT, A.A.; MAMET, A.P.;  
MIKHAYLENKO, P.S.; PROKHOРОV, F.G.; SOKOLOV, I.M.; CHERNOVA, L.A.;  
SHKROB, M.S.; YANKOVSKIY, K.A.; GUREVICH, L.S.; POLYAKOV, V.V.

To the editors of "Energetik." Energetik 5 no.3:11-12 Mr '57.  
(MIRA 10:3)

1. Vsesoyuznyy teplotekhnicheskiy institut im. Dzerzhinskogo (for  
Akol'zin, Kot, Yankovskiy) 2. TSentral'nyy kotoloturbinnyy institut  
(for Gurvich, Mamet.) 3. Teplo-elektro-proekt (for Gurevich). 4. Mi-  
nisterstva elektrostantsiy (for Kotlyar, Prokhorov). 5. Teplovaya  
elektricheskaya tsentral'naya stantsiya No.9 (for Mikhaylenko, Polya-  
kov) 6. Perevyazochnyy etapnyy punkt (for Sekolov). 7. Moskovskoye  
rayonnoye upravleniye energokhozyaystva (for Chernova). 8. Energi-  
cheskiy institut Akademii nauk SSSR (for Shkrob).  
(Boilers)

156.7446, 1  
USATOV, Ivan Andreyevich; POLYAKOV, V.V., retsentent; BOGINSKIY, M.N., red.; SEMENOVA, M.M., red.izd-va; UVAROVA, A.F., tekhn.red.

[Balance sheet in factory management; using accounts of machinery manufacturing enterprises for analysis and improvement of their activities] Balans v upravlenii zavodom; izpol'zovanie otchetnosti mashinostroitel'nogo predpriatiia dlia analiza i uluchsheniia ego deiatel'nosti. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 107 p.

(MIRA 11:4)

(Machinery industry--Accounting)

POLYAKOV, V.V., inzh., red.; PLAKSERMAN, Yu.N., red.; MEDVEDEV, L.Ya.,  
tekhn.red.

[Soviet once-through boiler; experience in operation and outlook  
for development] Sovetskie priamotochnye kotly; opyt eksploatatsii  
i perspektivy razvitiia. Moskva, Gos.energ.izd-vo, 1958. 206 p.  
(Boilers) (MIRA 11:7)

L 00682-67 EWT(1)

ACC NR: AP6005306

SOURCE CODE: UR/0413/66/000/001/0040/0041

AUTHORS: Saprykin, V. S.; Baranov, Yu. V.; Belyakov, A. S.; Leont'yev, M. Ya.;  
Polyakov, V. V.; Potnevskiy, A. M.; Morozkin, B. S.

ORG: none

30

B

TITLE: A coaxial switch. Class 21, No. 177478

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 40-41

TOPIC TAGS: electronic switch, coaxial cable

ABSTRACT: This Author Certificate presents a coaxial switch fitted with connectors mounted in the front part of the switch casing. These connectors are used for connecting the coaxial lines which are switched. The switch also contains an element connected with the switching mechanism and with the catches of the switch operating positions. The design increases the quality of the connecting contacts. An ungrounded section of a nonsymmetrical strip line is used as the switching element. This ungrounded section rests on the contact disks connected with the central pin of the connectors. The switching mechanism is fitted with a ring containing a spring-loaded rod which rests on one of the small balls of the catch. A bushing is mounted on the rod and is rigidly connected to the dielectric holder of the switching mechanism (see Fig. 1). A second spring-loaded small ball of the catch is mounted

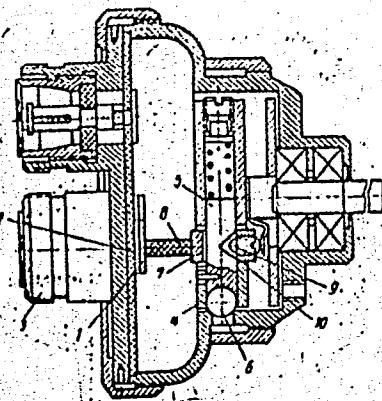
Card 1/2

UDC: 621.316.544.9

L 00682-67

ACC NR: AP6005306

Fig. 1. 1 - ungrounded section of a nonsymmetrical strip line; 2 - contact disks; 3 - connector; 4 - ring; 5 - spring-loaded rod; 6 - small ball of the catch; 7 - bushing; 8 - dielectric holder; 9 - spring-loaded small ball; 10 - triangular groove.



in the radial channel of the ring. This ball enters in the triangular groove located on the lateral surface of the rod. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 16Sep64

Card 2/2 fy

POLYAKOV, V.V., slesar'

Unit for loading and unloading machinery transported on motor-trucks. Stroi. truboprov. 10 no.2;28 F '65. (MIRA 13:5)

1. Stroitel'noye upravleniye No.12 tresta Ukrugazneftestroy, Dnepropetrovsk

SHCHERBATEKO, V.V.; MIKULINSKAYA, L.R.; BORZENKOVA, I.Ye.;  
POLYAKOV, V.V., red.; SELIVERSTOVA, R.L., red.izd-va;  
SOTNIKOVA, N.F., tekhn. red.

[Collection of technological instructions for baked products  
in rural bakeries] Sbornik tekhnologicheskikh instruktsii na  
khlebobulochnye izdeliya dlia sel'skogo khlebopecheniya.  
Moskva, Izd-vo TSentrosoiuza, 1963. 134 p. (MIRA 17:3)

1. TSentral'nyy soyuz potrebiteľ'skikh obshchestv SSSR. Up-  
ravleniye organizatsii proizvodstv.

POLYAKOV, V.V., inzh.; SOBININ, A.I., inzh.; BATALOV, Sh.Sh., inzh.

Use of optical centering devices in fitting operations. Sudostroenie  
26 no.3(209):46-48 Mr '60. (MIRA 14:11)  
(Shipfitting)

ROCHEV, N.N., glav. red.; VAVILOV, P.P., red.; VERTEL', E.I., red.; GORELIK, A.I., red.; GUZMAN, I.S., red.; KUZNETSOV, G.N., red.; MEDVEDEV, G.A., red.; MODYANOV, Ya.V., red.; PANTELEYEVA, A.A., red.; POLYAKOV, V.V., red.; POPOV, S.A., red.; POPOVA, S.M., red.; RAYEVSKIY, S.S., red.; RUDAKOV, S.V., red.; SYUTKIN, A.F., red.; USOV, A.I., red.; USTINOVA, I.K., red.; SHKIL', P.T., red.; CHEBYKIN, N.P., red.; MEZENTSEV, S.A., red.; MOROZOV, V.S., red.; OPLESNIN, I.I., tekhn. red.

[Forty years of the Komi A.S.S.R., 1921-1961; studies on the cultural and economic development of the Komi Republic] 40 let Komi ASSR, 1921-1961; ocherki o razvitiu ekonomiki i kul'tury Komi Respubliki. Syktyvkar, Komi knizhnoe izd-vo, 1961. 154 p. (MIRA 14:11)  
(Komi A.S.S.R.—Economic conditions) (Komi A.S.S.R.—Culture)

POLYAKOVA, V., red.

[Grow mushrooms] Vyreshchivaitse shampin'ony. Moskva, Mosk.  
rabochii, 1958. 98 p. (MIRA 13:7)  
(Mushrooms)

POLYAKOVA, V., red.

[Private garden plots and orchards] Sad i ogorod na priusadebnom  
uchastke. Izd.2., dop. Moskva, Mosk.rabochii, 1959. 398 p.  
(MIRA 13:7)

(Fruit culture) (Vegetable gardening)

ZHUKOV, Arkadiy Vladimirovich, kand.tekhn.nauk; POLYAKOV, V.V., red.;  
LISENKO, F.K., red.

[New building materials in housing construction; material for  
lectures] Novi budivel'ni materialy v zhytlovomu budivnytstvi;  
materialy do lektseii. Kyiv, 1958. 27 p. (Tovarystvo dlia  
poshyrennia politychnykh i naukovykh znan' URSR. Ser.12, no.3)  
(Building materials) (MIRA 12:4)

POLYAKOV, V.V., inzh.

In reference to Engineer I.A. Karmazin's article "Water supply simplification and improvements and tests on automatic braking in hydraulic turbine-generator units." Elek.sta. 28 no.12:84-85 D'57.

(MIRA 12:3)

(Hydraulic turbines)

POLYAKOV, V.V., inzh.; LARICHEV, V.A., inzh.

Service tests for new brands of steel at the thermal electric power plant No.9 of the Moscow Regional Power System Administration [with summary in English]. Teploenergetika 5 no.12:44-48 D '58.  
(MIRA 11:12)

1. TETs - 9 Moskovskogo otdeleniya TSentral'nogo nauchno-issledovatel'skogo kotloturbinnogo instituta.  
(Steel--Testing)

**AUTHORS:** Polyakov, V.V. (Engineer)  
Kartsev, V.S. (Engineer) SOV/96-58-12-8/18

**TITLE:** Operational tests on new grades of steel in Heat and Electric Power Station No.9. of the Moscow Power system. (Эксплуатационные испытания новых марок стали на БЭС-9 Мосэнерго)

**PERIODICAL:** Тяжематериалы, 1958, No.12, pp. 44-48 (УДК).

**ABSTRACT:** In recent years a good deal of work has been done to develop the new in power stations of pearlitic and austenitic steels capable of operating at temperatures of 550 - 700°C. Preliminary verification of the steels under operating conditions is most important. Such testing indicates the effects of high temperature and temperature variations on the properties of the metal during prolonged operation, and also the influence of the working media on its chemical stability. Since 1948, the Bureau of Direct-Flow Boiler Construction, together with Heat and Electric Power Station No.9. of Moscowenergo, has been studying the behaviour of several new pearlitic steels which were manufactured in the form of lengths of pipes in a super-heater section in a boiler operating at steam conditions of 140 atm and 500°C with a maximum tube wall temperature of 560 - 570°C. The test results confirmed the advisability of introducing into boiler manufacture such grades of steel as EI-531 and 12KhMf, which are more heat-resistant than the steel grade 15KhM hitherto used. In 1954 the Moscow Division of the Moscow Central Boiler Turbine Institute and

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Operational tests of new grades of steel in Heat and Electric Power Station No.9 of the Moscow Power system. Sov/96-55-12-8/18

Heat and Electric Power Station No.9 of Moscowenergo commenced work on operational testing of a number of heat-resisting steels on an independent test section of a superheater. The first such section was in the form of a separate coil made of tubes 32 x 6 mm of the several grades of steel that had to be tested. The experimental coil was installed in the furnace chamber of direct flow boiler No.1, in a zone where the gas temperature was 1100 - 1200°C. A photograph of the experimental tubing is given in Fig.1, and a schematic circuit diagram of its connection to the boiler in Fig.2. The operating conditions and instrumentation are described. As the temperature is controlled manually, some variations occur, as will be seen from the temperature recording in Fig.3. Until 1957 the boiler operated on pulverized fuel of local Donets coal, and since 1957 has been gradually turned over to gas fuel. The operating conditions of the test coil are tabulated. As mentioned above, it comprises tubes of various grades of heat-resistant steel; the lower rows, where the working temperature of the metal is not greater than 800 - 820°C, are of pearlite steels and the upper rows, operating at higher temperatures, are austenitic steel. Individual sections of tubes of one and the same grade of steel are welded into two or three rows and are thus tested at different working temperatures. During the first year of operation of the coil it was

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Operational tests on new grades of steel at East and Elektro-1 SOV/96-58-12-8/18  
Power Station No.9 of the Moscow Power system.

made up of the austenitic steels available at that time, grades EI-257, EI-448 and EI-512, and of pearlitic steels EI-531 and 15E1W. The following grades of steel were introduced as they became available: austenitic steels EI-694, EI-695, EI-245N, EI-773, EI-2579 and EI-18NI2T; and pearlitic steels 12Kh23B and 12Kh2W, as well as welded joints of various combinations of these steels, including joints between pearlitic and austenitic steels. The methods used to evaluate the tubes in service are briefly explained. It was found that when burning pulverized fuel with gas-flow from top to bottom, the tubes in the upper row of the coil were subject to considerable erosion, as indicated diagrammatically in Fig.4. In addition, several grades of steel, and in particular EI-694 (19% Cr, 10% Ni and 1% Mn), suffer gas corrosion at operating temperatures of 650 - 770°C. This, visible from photomicrographs of the external surface given in Fig.5. Steels of high chromium content (16 - 18%) are more resistant to gas corrosion at temperatures of the order of 700°C; a fairly solid film of oxide 0.10 - 0.15 mm thick is formed on them. The occurrence of corrosion and erosion shows the need for operational testing of chrome-nickel steels before they are generally introduced into service. The effect of prolonged operation on the mechanical properties is illustrated in Fig.6, by histograms which demonstrate the general tendency of all austenitic steels to increase in ultimate strength and hardness with

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Operational tests on new grades of steel in Heat and Electric Power Station No.9 of the Moscow Power system. SOT/ 96-58-12-8/18

some loss of plastic properties. There is also some loss of impact strength but it remains sufficiently high even after 5 - 15,000 hours operation. Accordingly the changes in mechanical properties give no cause for alarm. Metallographic analysis provide general confirmation of the mechanical test results. Although all the austenitic steels maintained satisfactory properties after prolonged operation at temperatures of 600 - 700°C, it does not follow that they are all of equal long-term strength. More accurate laboratory tests are required for this purpose; for example, it is difficult to detect creep directly on the coils. It is proposed to continue operating the experimental coil during 1958/59 and to raise the steam temperature at the outlet to 660 - 670°C and the maximum working temperature of the metal to 720 - 750°C; also, to test two new grades of steel (EI-728 and 18/13-V2RR) intended for use in super-heaters of boilers for steam conditions of 315 atm and 655°C. In 1958, in order to study the behaviour of pearlitic steels at operating temperatures of 600 - 620°C a second test coil was installed in the convection part of the boiler beyond the high-pressure superheater. The coil operates at a steam pressure of 140 atm and a temperature of 580 - 580°C. It is made of pearlitic steels grades 12Kh18N10F, 15Kh1M1F, EI-531 and 12Kh2M1F32. The main object of these tests is to confirm the possibility of dispensing

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Operational tests on new grades of steel in Heat and Electric 80V/96-58-12-6/18 Power Station No.9 of the Moscow Power system.

with austenitic steel in the hottest sections of the superheaters of boilers with steam conditions of 140 atm and 530°C. The pearlitic steels are all of adequate strength and it was desired to determine their resistance to scaling at temperatures of 600 - 620°C.

The nature of the oxide films formed on them during prolonged operation in a gaseous medium also required study. The small size of the test coil limits the possibility of studying pearlitic steels under various boiler operating conditions using high steam conditions. Therefore, in 1957, the entire superheater of boiler No.1 and part of the steam piping for conditions of 140 atm and 565°C were reconstructed using the same grades of pearlitic steels. This will provide full-scale test results about the suitability of the various grades of steel. Since 1st April, 1958 the reconstructed boiler has been operating.

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Operational tests on new grades of steel in Heat and Electric Power Station No.9 of the Moscow Power system. Sov/90-58-12-8/18

with the designed steam conditions and the first test results will become available during 1959. There are 6 figures and 1 table.

ASSOCIATION: Heat & Electric Power Station No.9 and Moscow Division, Central Boiler Turbine Institute (KETs-9 i MO ReKTI)

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"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342010015-4

KUZ'MIN, V.N., inzh.; POLYAKOV, V.Ya., inzh.; YAKHNIS, V.A., inzh.

Results of the tests of compact radial labyrinth glands.  
Energomashinostroenie 10 no.12:37-39 D '64. (MIRA 18:2)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342010015-4"

ISHUTINOV, D.V., inzh.; POLYAKOV, V.Ya., inzh.; KIRNCS, I.V., inzh.

Results of studying a model of the N-300-1,23 centrifugal supercharger.  
Teploenergetika 12 no.5:44-48 My '65. (MIRA 18:5)

1. Ural'skiy turbomotornyy zavod.

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342010015-4

POLYAKOV, V.Ya., inza.

Stand tests of the N-300L 23 centrifugal gas blower.  
Energomashinostroenie 12 no.8:44 Ag '64. (MIRA 17.31)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001342010015-4"

POLYAKOV, V. Ya.

"Poplars and Poplar Forests of the Angara-Yenisey Basin." Sub 17  
Jan 51, Inst of Forestry, Acad Sci USSR.

Dissertations presented for science and engineering degrees in  
Moscow during 1951.

SO: Sum. No. 480, 9 May 55

POLYAKOV, V. YE.

USSR/Electricity - Inverters

Apr 52

"Extinguishing of the Excitation Arc in Tubes of Rectifier-Inverter Installations," I. A. Krichenova, V. Ye. Polyakov; Docent V. M. Sin'kov, Candidates Tech Sci

"Elektrichestvo" No 4, pp 42-45

Discusses the effect of circuit inductance and capacitance and relationships of the control angles of the tubes on the stability of the excitation arc

in the tubes of a rectifier-inverter installation having a rectified voltage of 12 kv. Submitted 10 Aug 51.

228T53

8(6), 14(6)

SOV/143-58-10-18/24

AUTHORS:

Bayev, A.V., Candidate of Technical Sciences, Docent,  
Krichenova, I.A., Polyakov, V.Ye., Sin'kov, V.M.,  
Srodnnykh, V.Yu., Engineer

TITLE:

The Experimental D.C. Power Line from UPI to UEA

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy, Energetika,  
1958, Nr 10, pp 144-145 (USSR)

ABSTRACT:

On February 10, 1948, the construction of the first experimental d.c. power line in the USSR was completed, connecting the UPI - Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (Ural Polytechnic Institute imeni S.M. Kirov) with UEA - "Uralelectroapparat" plant in Sverdlovsk. The preparations for building this d.c. line began in 1947 by an order signed by the directors of UPI and UEA. Planning, constructing, operating and research were carried out jointly by UPI and UEA. This power line may serve as an example for the cooperation between an industrial installation and a vuz. All planning was done by the authors of this article at Kafedra elektricheskikh stantsiy, setey

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SOV/143-58-10-18/24

The Experimental D.C. Power Line from UPI to UEA

i sistem UPI (Chair of Electric Power Plants, Networks and Distribution Systems of UPI) with consultation of leading employees of the mercury rectifier department of the UEA, L.M. Klyachkin, V.K. Krapivin, I.N. Faleyev. The basic and auxiliary equipment was furnished by UEA, while UPI provided materials for the line. The construction of the line was performed by the organization "Uralelektromontazh", L.M. Lipovetskiy and S.V. Khlynov, with participation of the Institute. The d.c. power line was prepared for operation by UIP (Khlebnikov, I.Ya., Senior Laboratory Assistant, and others) with participation of UEA representatives. The rectifier substation was set up at the 6 kv substation supplying the Vtuzgorodok (Institute area). For installing the inventors, free chambers in a substation feeding one of the training buildings were used, of which a part was occupied by UEA. The rectified voltage was 12 kv. The equipment of the rectifier and inverter stations was designed for transmitting 180 kw. The length of the overground line was

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The Experimental D.C. Power Line from UPI to UEA SOV/143-58-10-18/24

somewhat shorter than 500 m. In a special laboratory preliminary studies were conducted with the rectifier and inverter equipment, emphasizing safety measures, since a number of students did not yet have the required experience. The equipment was installed upon completion of the construction work by a group of 12-15 senior students. The experimental operation was also performed by students, among them B.A. Astakhov, P.N. Zakharov and his brother, Kokin, Teploukhov and others. The Ekspluatatsionno-tehnicheskoye upravleniye UPI (Operational-Technological Administration of UPI), S.A. Yakimov, N.A. Morozov, M.A. Bobich and others, furnished great assistance for this project. The first period of operation of the d.c. power line was characterized by short duration of stable power transmission. After two to four hours various malfunctions of the six-anode mercury rectifiers occurred, etc. Some research work was conducted on a contract basis with the "Uralelektrapparat" plant and the Institut postoyannogo toka MES SSSR (Institute

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SOV/143-58-11-2/16

AUTHORS: Kovachik, I., Engineer, Polyakov, V.Ye., Candidate  
of Technical Sciences

TITLE: Noncontact Remote Switching Equipment for Purposes of  
Relay Protection and Automation of Power Distribution  
Networks

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika,  
1958, Nr 11, pp 15-20 (USSR)

ABSTRACT: The authors discuss the application of remote controls  
in combination with relay protection devices in power  
distribution networks. First, they consider the field  
of application of remote-controlled relay protections.  
Their use provides the possibility for further simpli-  
fication of relay protection for power distribution  
networks and increases the response speed. A large  
number of relay protections does not include 100% of  
the power line and their application is limited there-  
fore. Remote-controlled switching equipment, however,  
facilitates the disconnection of a power line at both  
ends and is simpler in its design. In this connection,

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Noncontact Remote Switching Equipment for Purposes of Relay Protection and Automation of Power Distribution Networks

the authors mention the remote-controlled disconnection of generators during overloads at Chelyabenergo [Ref 17]. Using the advantages of remote-controlled protections is delayed by the absence of special, mass-produced remote-controlled switching gear satisfying the specific requirements. The latter are explained by the authors in detail. They consist in 1) rapid response (the signal transmission time for disconnecting must be comparable with the operating time of modern rapid-action protectors, i.e. it must amount only to three to five cycles); 2) simplicity of the circuits; 3) small capacity of the device (for one order); 4) the possibility of transmitting the remote-controlled switching signal on HF channels on the power line or by communication channels. Presently, the TU-TS equipment is used in power distribution systems having a capacity of 50-80 controlled objects and a signal transmission time of 3 + 5 seconds. The latter does not meet the rapid response requirements. The BSK-54

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Noncontact Remote Switching Equipment for Purposes of Relay Protection and Automation of Power Distribution Networks

device controls 48 objects with a signal transmission time of 0.2 seconds having a high reliability. However, the capacity of this unit in regard to the number of controlled objects is too small. At TsNIIEI MES a remote control apparatus with magnetic elements having a rectangular hysteresis loop was developed. The plant "Elektropul't" will begin the production of this equipment. The author explains the functioning of the magnetic elements with a rectangular hysteresis loop which have two stable states "0" and "1". They are stable against temperature changes and feed voltage fluctuations. Figure 2 shows the block diagram of such protection unit. The functioning of the unit is explained by the circuit diagram, shown in figure 3. The signal transmission time is 0.13-0.17 seconds until the relay RP<sub>2</sub> is actuated. A MKU-48 relay may be used as an RP relay. The cost of one unit is presently approximately 800 rubles at a cost of 40 rubles for one core with rectangular hysteresis loop. In case

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POLYAKOV, V. YE

USSR/Electricity - Rectifiers  
Inverters

Nov 52

"Characteristics of Converter Installations," Cand Tech Sci A. V. Bayev, I. A. Krichenova, V. Ye. Polyakov, V. M. Sin'kov, and Engr V. Yu. Srodnikh, Ural Polytech Inst imeni Kirov

"Elektrichestvo" No 11, pp 51-52

Cites procedure for constructing characteristic curves of converter (rectifier and inverter) installations using regulation angles alpha and beta as coordinates. Most important relationships from point of view of operation are obtained for case of infinite inductance in rectified current circuit. Submitted 10 Apr 52

(EEA 56, no. 666:2398 '53)

PA 240T66

POLYAKOV V, YE.

POLYAKOV, V.Ye., dotsent, kandidat tekhnicheskikh nauk.

Scientific and technical consultation on the automatization and  
telemechanization of electric power systems. Elektrичество no.4:89  
Ap '54. (MIRA 7:5)

1. Organizatsiya VNITOE pri Ural'skom politekhnicheskem institute  
im. Kirova. (Electric power distribution)

BAYEV, A.V.; KRICHENOV, I.A.; POLYAKOV, V.Ye.; SIN'KOV, V.M.; SRODNYKH,  
V.Yu.

Decennial of the operation of the experimental d.c. line in  
Sverdlovsk. Elektrichestvo no.6:93 Je '58. (MIRA 11:6)  
(Sverdlovsk--Electric lines)